

AMENDMENTS TO THE DRAWINGS

The attached "Replacement Sheets" of drawings include changes to Figures 1-8.

The attached "Replacement Sheets," which include Figures 1-8, replace the original sheets including Figures 1-8.

Attachment: Replacement Sheets

REMARKS

Claims 3, 5 and 13 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

ELECTION/RESTRICTION

Although Applicant does not necessarily agree with the requirement, withdrawn claims 1, 2, 6-12, 14 and 15 are cancelled.

DRAWINGS

The drawings stand objected to for certain informalities. Applicant attaches revised drawings for the Examiner's approval. In the "Replacement Sheets" the reference numbers from pages 15-31 of the specification are inserted. No new matter is added.

SPECIFICATION

Applicant submits a replacement abstract herewith that conforms to the claims as pending. Favorable consideration of the replacement abstract is respectfully requested.

REJECTION UNDER 35 U.S.C. § 102

Claim 5 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Oberg (U.S. Pat. No. 3,330,252). This rejection is respectfully traversed. Notwithstanding, claim 5 is amended.

Amended claim 5 calls for a mask vapor deposition system including a deposition mask for attracting a subject for deposition using electrostatic attraction. The mask is made of silicon. Also, the mask has positive and negative electrodes thereon. An evaporation source is provided for evaporating the deposition material. A vacuum chamber is also provided. The mask and source are at least placed in the vacuum chamber. Oberg fails to teach such an arrangement.

More particularly, Oberg teaches a mask 22. The mask 22 is made of an electrically conductive material. An insulating layer 24 is provided immediately above the mask 22. The insulating layer 24 is formed of silicon monoxide. An electrically conductive substrate 26 is formed adjacent the insulating layer 24. Oberg fails to teach a mask made of silicon and a mask having positive and negative electrodes thereon in combination with the other elements recited in claim 5.

In contrast to Oberg, according to the claimed arrangement, since the deposition mask is prepared using a single silicon substrate, a deposition mask having high flatness and high definition can be prepared. Also, since wiring lines are placed on the silicon substrate and arranged in an interdigital pattern, and positive and negative electrodes are alternately arranged, electrostatic attraction is increased, thereby increasing the attracting force.

In view of the foregoing it can be appreciated that Oberg fails to anticipate claim 5. Therefore, reconsideration and withdrawal of this rejection are respectfully requested.

REJECTION UNDER 35 U.S.C. § 103

Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Oberg in view of Lee et al. (U.S. Pat. Pub. No. 2003/0196680). This rejection is respectfully traversed. Notwithstanding, claim 3 is amended.

Claim 3 calls for a mask vapor deposition system including an electrostatic chucking mechanism for attracting a subject for deposition using electrostatic attraction and a deposition mask that is brought into close contact with a face of the deposition subject for depositing a deposition material in a predetermined pattern. The face is reverse to that of the deposition subject attracted by the electrostatic chucking mechanism. Further, the mask is made of silicon. An evaporation source for evaporating the deposition material is provided. A vacuum chamber is also provided. The mechanism, mask, and source are at least placed in the vacuum chamber.

Oberg fails to teach a mask made of silicon in combination with the other elements recited in claim 3. Lee also fails to teach this feature of the claimed invention. As such, the combination of Oberg with Lee fails to teach or suggest the claimed invention. Thus, the combination of Oberg and Lee cannot render claim 3 unpatentable.

Claims 4 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Oberg in view of Lee et al. and further in view of Fujimori et al. (JP 10-041069). This rejection is respectfully traversed. Notwithstanding, claim 4 is cancelled and claim 13 is amended.

Claim 13 calls for an apparatus for manufacturing a display panel including an electrostatic chucking mechanism for attracting a glass substrate that is a subject for deposition using electrostatic attraction and a deposition mask to be brought into close

contact with a face of the glass substrate in order to deposit an organic material which is used for forming electroluminescent elements on the glass substrate in a predetermined pattern. The face is reverse to that of the glass substrate attracted by the electrostatic chucking mechanism. Also, the mask is made of silicon. An evaporation source for evaporating the organic material is provided. A vacuum chamber is also provided. The mechanism, mask, and source are at least placed in the vacuum chamber.

Oberg and Lee each fail to teach a mask made of silicon in combination with the other elements recited in claim 13. Fujimori also fails to teach this feature of the claimed invention. As such, the combination of Oberg, Lee and Fujimori cannot render claim 13 unpatentable.

It should also be appreciated that according to the claimed invention, the glass substrate 20 is attractively retained on the stage 1 by the electrostatic chucking in advance, the warp of the glass substrate 20 is corrected, and the deposition material is deposited on the glass substrate 20 in such a manner that the deposition mask 2 is brought into close contact with the glass substrate 20. Therefore, the adhesion between the deposition mask 2 and the glass substrate 20, which is a subject for deposition, can be enhanced. Thus, the deposition material is prevented from sticking onto shadow areas, whereby the deposition can be precisely performed. Since electrostatic chucking is employed, the deposition mask 2 can be prepared using a material that is not attracted by a magnet. Thus, a material, such as silicon, which has high processing accuracy and is hardly deformed, can be used. Even if the glass substrate 20 is large in size, the center area is not deformed by the attraction, whereby the alignment can be performed in a short time. In contrast to methods using

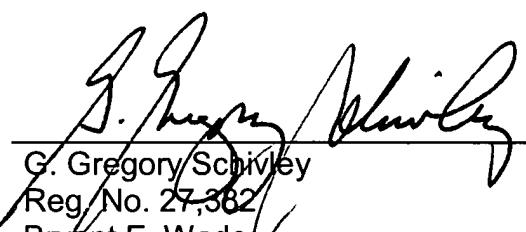
permanent magnets, the attraction is not performed after the deposition subject is brought into close contact with the mask. Therefore, displacement is not caused by the shock generated during the attraction, whereby the deposition can be performed while the precise alignment is maintained.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: Feb 15, 2006

By: 

G. Gregory Schivley
Reg. No. 27,362
Bryant E. Wade
Reg. No. 40,344

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. Box 828
Bloomfield Hills, Michigan 48303
(248) 641-1600

[GGS/BEW/jmz]